

Evans, Diane

From: Michael Pfeil <michael.pfeil@tceq.texas.gov>
Sent: Tuesday, December 03, 2013 11:13 AM
To: Evans, Diane
Cc: Mike Lindner
Subject: RE: WER update

Sounds good, Diane. So we are waiting to hear back from HQ, correct?

In my opinion, it does make more sense to use the segment hardness, as I previously said. We did agree to cap WERs at 10 at one point, did we not?

Mike

From: Evans, Diane [mailto:evans.diane@epa.gov]
Sent: Monday, December 02, 2013 11:17 AM
To: Michael Pfeil
Subject: WER update

Hi Mike,

Hope you had a nice Thanksgiving break!. After talking with Melinda about the hardness normalization process, we decided that we needed to ask the aquatic life criteria experts at HQ. With some more digging, Melinda found notes that she had made following a 2006 conversation on WERs with Steve Bainter (who left EPA several years ago).

In Melinda's notes, one option is to normalize the lab water LC50 results to the segment hardness used to derive the permit limit (i.e., 74 mg/L). The individual WERs would be calculated by dividing the un-normalized site-water LC50s (i.e., LC50s for 100% effluent) by the hardness-adjusted LC50s for lab water (adjusting to a hardness of 74 mg/L). Under this approach, the final WER for dissolved copper from the above study is: 11.74 (if I did the math correctly).

Sooo, the three approaches give us a wide range in a final WER – >10 as described above, 7.25 (not normalized) and 3.3 (normalizing both lab and site to the same hardness). I sent this to HQ on Friday afternoon before Thanksgiving, so I'm not sure if they've been in the office to read.

We also asked about the weird LC50 equation in the 1997 update and another question that Melinda thought of on the 2001 streamlined copper. I think one of our criteria experts at HQ (Charlie D) worked on the WER guidance. He has the long-term EPA memory on the criteria development issues – not sure if he's close to retirement, but it's good for us to get these answers in writing when we can.

I hope to start Azko later this week. Thanks for your patience!

Diane